

SEQUENCE LISTING

<110> Monahan, John
 Zhao, Xumei
 Chen, Yan
 Glatt, Karen
 Kamatkar, Shubhangi

<120> COMPOSITIONS, KITS AND METHODS FOR IDENTIFICATION,
 ASSESSMENT, PREVENTION, AND THERAPY OF CERVICAL
 CANCER

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<151> 2002-08-20

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<212> PRT

<213> Homo sapiens

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35          40          45
Phe Gly Leu Ala Ile Gly Thr Leu Ala Gln Ala Leu Gly Pro Val Ser
50          55          60
Gly Gly His Ile Asn Pro Ala Ile Thr Leu Ala Leu Leu Val Gly Asn
65          70          75          80
Gln Ile Ser Leu Leu Arg Ala Phe Phe Tyr Val Ala Ala Gln Leu Val
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Gly Ala Ile Ala Gly Ala Gly Ile Leu Tyr Gly Val Ala Pro Leu Asn
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<210> 8

<211> 210

<212> PRT

<213> Homo sapiens

<400> 8

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Glu	Phe	Leu	Ala	Thr	Leu	Ile	Phe	Val	Phe	Phe	Gly	Leu	Gly	Ser	Ala
			20					25					30		
Leu	Lys	Trp	Pro	Ser	Ala	Leu	Pro	Thr	Ile	Leu	Gln	Ile	Ala	Leu	Ala
		35					40					45			
Phe	Gly	Leu	Ala	Ile	Gly	Thr	Leu	Ala	Gln	Ala	Leu	Gly	Pro	Val	Ser
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Gly	Gly	His	Ile	Asn	Pro	Ala	Ile	Thr	Leu	Ala	Leu	Leu	Val	Gly	Asn
65					70					75					80
Gln	Ile	Ser	Leu	Leu	Arg	Ala	Phe	Phe	Tyr	Val	Ala	Ala	Gln	Leu	Val
				85					90					95	
Gly	Ala	Ile	Ala	Gly	Ala	Gly	Ile	Leu	Tyr	Gly	Val	Ala	Pro	Leu	Asn
			100					105					110		
Ala	Arg	Gly	Asn	Leu	Ala	Val	Asn	Ala	Ile	Tyr	Phe	Thr	Gly	Cys	Ser
		115					120					125			
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	130					135					140				
Ser	Pro	Ala	His	Trp	Val	Phe	Trp	Val	Gly	Pro	Ile	Val	Gly	Ala	Val
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Leu	Ala	Ala	Ile	Leu	Tyr	Phe	Tyr	Leu	Leu	Phe	Pro	Asn	Ser	Leu	Ser
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Leu	Ser	Glu	Arg	Val	Ala	Ile	Ile	Lys	Gly	Thr	Tyr	Glu	Pro	Asp	Glu
			180					185					190		
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Thr	Arg														
	210														

<210> 9

<211> 2180

<212> DNA

<213> Homo sapiens

<400> 9

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<210> 10

<211> 222

<212> PRT

<213> Homo sapiens

<400> 10

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Glu Phe Leu Ala Thr Leu Ile Phe Val Phe Phe Gly Leu Gly Ser Ala
 20          25          30
Leu Lys Trp Pro Ser Ala Leu Pro Thr Ile Leu Gln Ile Ala Leu Ala
 35          40          45
Phe Gly Leu Ala Ile Gly Thr Leu Ala Gln Ala Leu Gly Pro Val Ser
 50          55          60
Gly Gly His Ile Asn Pro Ala Ile Thr Leu Ala Leu Leu Val Gly Asn
 65          70          75          80
Gln Ile Ser Leu Leu Arg Ala Phe Phe Tyr Val Ala Ala Gln Leu Val
 85          90          95
Gly Ala Ile Ala Gly Ala Gly Ile Leu Tyr Gly Val Ala Pro Leu Asn
100          105          110
Ala Arg Gly Asn Leu Ala Val Asn Ala Leu Asn Asn Asn Thr Thr Gln
115          120          125
Gly Gln Ala Met Val Val Glu Leu Ile Leu Thr Phe Gln Leu Ala Leu
130          135          140
Cys Ile Phe Ala Ser Thr Asp Ser Arg Arg Thr Ser Pro Val Gly Ser
145          150          155          160
Pro Ala Leu Ser Ile Gly Leu Ser Val Thr Leu Gly His Leu Val Gly
165          170          175
Ile Tyr Phe Thr Gly Cys Ser Met Asn Pro Ala Arg Ser Phe Gly Pro
180          185          190
Ala Val Val Met Asn Arg Phe Ser Pro Ala His Trp Gly Leu Leu Leu
195          200          205
Ser Leu Arg Gly Gly Asp Thr Arg Ser Val His Pro Ser Leu
210          215          220

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<210> 11

<211> 1051

<212> DNA

<213> Homo sapiens

<400> 11

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<210> 12

<211> 180

<212> PRT

<213> Homo sapiens

<400> 12

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Met Ala Ser Thr Ser Tyr Asp Tyr Cys Arg Val Pro Met Glu Asp Gly
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Asp Lys Arg Cys Lys Leu Leu Leu Gly Ile Gly Ile Leu Val Leu Leu
 20             25             30
Ile Ile Val Ile Leu Gly Val Pro Leu Ile Ile Phe Thr Ile Lys Ala
 35             40             45
Asn Ser Glu Ala Cys Arg Asp Gly Leu Arg Ala Val Met Glu Cys Arg
 50             55             60
Asn Val Thr His Leu Leu Gln Gln Glu Leu Thr Glu Ala Gln Lys Gly
 65             70             75             80
Phe Gln Asp Val Glu Ala Gln Ala Ala Thr Cys Asn His Thr Val Met
 85             90             95
Ala Leu Met Ala Ser Leu Asp Ala Glu Lys Ala Gln Gly Gln Lys Lys
100             105             110
Val Glu Glu Leu Glu Gly Glu Ile Thr Thr Leu Asn His Lys Leu Gln
115             120             125
Asp Ala Ser Ala Glu Val Glu Arg Leu Arg Arg Glu Asn Gln Val Leu
130             135             140
Ser Val Arg Ile Ala Asp Lys Lys Tyr Tyr Pro Ser Ser Gln Asp Ser
145             150             155             160
Ser Ser Ala Ala Ala Pro Gln Leu Leu Ile Val Leu Leu Gly Leu Ser
165             170             175
Ala Leu Leu Gln
180

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<210> 13

<211> 3445

<212> DNA

<213> Homo sapiens

<400> 13

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<210> 14
 <211> 211
 <212> PRT
 <213> Homo sapiens

<400> 14
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 Tyr Ser Tyr Ala Gly Asp Asn Ile Val Thr Ala Gln Ala Met Tyr Glu
 35 40 45
 Gly Leu Trp Met Ser Cys Val Ser Gln Ser Thr Gly Gln Ile Gln Cys
 50 55 60
 Lys Val Phe Asp Ser Leu Leu Asn Leu Ser Ser Thr Leu Gln Ala Thr
 65 70 75 80
 Arg Ala Leu Met Val Val Gly Ile Leu Leu Gly Val Ile Ala Ile Phe
 85 90 95
 Val Ala Thr Val Gly Met Lys Cys Met Lys Cys Leu Glu Asp Asp Glu
 100 105 110
 Val Gln Lys Met Arg Met Ala Val Ile Gly Gly Ala Ile Phe Leu Leu
 115 120 125
 Ala Gly Leu Ala Ile Leu Val Ala Thr Ala Trp Tyr Gly Asn Arg Ile
 130 135 140
 Val Gln Glu Phe Tyr Asp Pro Met Thr Pro Val Asn Ala Arg Tyr Glu
 145 150 155 160
 Phe Gly Gln Ala Leu Phe Thr Gly Trp Ala Ala Ser Leu Cys Leu
 165 170 175
 Leu Gly Gly Ala Leu Leu Cys Cys Ser Cys Pro Arg Lys Thr Thr Ser
 180 185 190
 Tyr Pro Thr Pro Arg Pro Tyr Pro Lys Pro Ala Pro Ser Ser Gly Lys
 195 200 205
 Asp Tyr Val
 210

<210> 15

<211> 1850

<212> DNA

<213> Homo sapiens

<400> 15

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<210> 16
 <211> 142
 <212> PRT
 <213> Homo sapiens

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<400> 16
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          20          25          30
Gly Ser Thr Ile Val Pro Gly Glu Gln Gly Ala Glu Tyr Gln His Phe
          35          40          45
Ile Gln Gln Cys Thr Asp Asp Val Arg Leu Phe Ala Phe Val Arg Phe
          50          55          60
Thr Thr Gly Asp Ala Met Ser Lys Arg Ser Lys Phe Ala Leu Ile Thr
65          70          75          80
Trp Ile Gly Glu Asn Val Ser Gly Leu Gln Arg Ala Lys Thr Gly Thr
          85          90          95
Asp Lys Thr Leu Val Lys Glu Val Val Gln Asn Phe Ala Lys Glu Phe
          100         105         110
Val Ile Ser Asp Arg Lys Glu Leu Glu Glu Asp Phe Ile Lys Ser Glu
          115         120         125
Leu Lys Lys Ala Gly Gly Ala Asn Tyr Asp Ala Gln Thr Glu
          130         135         140

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<210> 17
 <211> 662
 <212> DNA
 <213> Homo sapiens

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<400> 17
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<210> 18
 <211> 122
 <212> PRT
 <213> Homo sapiens

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<400> 18
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Val Val Arg Val Ala Ser Gly Ser Ala Val Val Leu Pro Leu Ala Arg
          20          25          30
Ile Ala Thr Val Val Ile Gly Gly Val Val Ala Met Ala Ala Val Pro

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      35              40              45
Met Val Leu Ser Ala Met Gly Phe Thr Ala Ala Gly Ile Ala Ser Ser
  50              55              60
Ser Ile Ala Ala Lys Met Met Ser Ala Ala Ala Ile Ala Asn Gly Gly
65              70              75              80
Gly Val Ala Ser Gly Ser Leu Val Gly Thr Leu Gln Ser Leu Gly Ala
      85              90              95
Thr Gly Leu Ser Gly Leu Thr Lys Phe Ile Leu Gly Ser Ile Gly Ser
      100              105              110
Ala Ile Ala Ala Val Ile Ala Arg Phe Tyr
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<210> 19
 <211> 653
 <212> DNA
 <213> Homo sapiens

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<210> 20
 <211> 119
 <212> PRT
 <213> Homo sapiens

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<400> 20
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Val Val Arg Val Ala Ser Gly Ser Ala Val Val Leu Pro Leu Ala Arg
      20              25              30
Ile Ala Thr Val Val Ile Gly Gly Val Val Ala Val Pro Met Val Leu
      35              40              45
Ser Ala Met Gly Phe Thr Ala Ala Gly Ile Ala Ser Ser Ser Ile Ala
      50              55              60
Ala Lys Met Met Ser Ala Ala Ala Ile Ala Asn Gly Gly Gly Val Ala
65              70              75              80
Ser Gly Ser Leu Val Ala Thr Leu Gln Ser Leu Gly Ala Thr Gly Leu
      85              90              95
Ser Gly Leu Thr Lys Phe Ile Leu Gly Ser Ile Gly Ser Ala Ile Ala
      100              105              110
Ala Val Ile Ala Arg Phe Tyr
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<210> 21
 <211> 4755
 <212> DNA
 <213> Homo sapiens

<400> 21

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<210> 22

<211> 1037

<212> PRT

<213> Homo sapiens

<400> 22

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Asn Pro Gly Ser Leu Phe Gly Tyr Ser Val Ala Leu His Arg Gln Thr
35      40      45
Glu Arg Gln Gln Arg Tyr Leu Leu Leu Ala Gly Ala Pro Arg Glu Leu
50      55      60
Ala Val Pro Asp Gly Tyr Thr Asn Arg Thr Gly Ala Val Tyr Leu Cys
65      70      75      80
Pro Leu Thr Ala His Lys Asp Asp Cys Glu Arg Met Asn Ile Thr Val
85      90      95
Lys Asn Asp Pro Gly His His Ile Ile Glu Asp Met Trp Leu Gly Val
100     105     110
Thr Val Ala Ser Gln Gly Pro Ala Gly Arg Val Leu Val Cys Ala His
115     120     125
Arg Tyr Thr Gln Val Leu Trp Ser Gly Ser Glu Asp Gln Arg Arg Met
130     135     140
Val Gly Lys Cys Tyr Val Arg Gly Asn Asp Leu Glu Leu Asp Ser Ser
145     150     155     160
Asp Asp Trp Gln Thr Tyr His Asn Glu Met Cys Asn Ser Asn Thr Asp
165     170     175
Tyr Leu Glu Thr Gly Met Cys Gln Leu Gly Thr Ser Gly Gly Phe Thr
180     185     190
Gln Asn Thr Val Tyr Phe Gly Ala Pro Gly Ala Tyr Asn Trp Lys Gly
195     200     205
Asn Ser Tyr Met Ile Gln Arg Lys Glu Trp Asp Leu Ser Glu Tyr Ser
210     215     220
Tyr Lys Asp Pro Glu Asp Gln Gly Asn Leu Tyr Ile Gly Tyr Thr Met
225     230     235     240
Gln Val Gly Ser Phe Ile Leu His Pro Lys Asn Ile Thr Ile Val Thr
245     250     255
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Glu Ala Gly Gly Asp Leu Arg Arg Arg Gln Val Leu Glu Gly Ser Gln

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Pro	Arg	Leu	Arg	Phe	Ala	Gly	Ser	Glu	Ser	Ala	Val	Phe	His	Gly	Phe	
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Thr	Glu	Val	Gln	Phe	Gln	Lys	Glu	Cys	Gly	Pro	Asp	Asn	Lys	Cys	Glu	
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 Phe Gln Val Gly Pro Met Gly Glu Gly Leu Val Gly Leu Gly Thr Leu
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 Leu Tyr Pro Thr Glu Ile Thr Val His Gly Asn Gly Ser Trp Pro Cys
 820 825 830
 Arg Pro Pro Gly Asp Leu Ile Asn Pro Leu Asn Leu Thr Leu Ser Asp
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 850 855 860
 Pro Gly Gly Gly Gln Gly Pro Pro Pro Val Thr Leu Ala Ala Ala Lys
 865 870 875 880
 Lys Ala Lys Ser Glu Thr Val Leu Thr Cys Ala Thr Gly Arg Ala His
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 Cys Val Trp Leu Glu Cys Pro Ile Pro Asp Ala Pro Val Val Thr Asn
 900 905 910
 Val Thr Val Lys Ala Arg Val Trp Asn Ser Thr Phe Ile Glu Asp Tyr
 915 920 925
 Arg Asp Phe Asp Arg Val Arg Val Asn Gly Trp Ala Thr Leu Phe Leu
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 Arg Thr Ser Ile Pro Thr Ile Asn Met Glu Asn Lys Thr Thr Trp Phe
 945 950 955 960
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 965 970 975
 Glu Leu Trp Leu Val Leu Val Ala Val Gly Ala Gly Leu Leu Leu
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 Gly Leu Ile Ile Leu Leu Leu Trp Lys Cys Gly Phe Phe Lys Arg Ala
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 <211> 4647
 <212> DNA
 <213> Homo sapiens

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Arg Asn Leu Gly Lys Ser Gly Leu Arg Val Ser Cys Leu Gly Leu Gly
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              35              40              45
Leu Ala Glu Glu Leu Ile Arg Pro Glu Arg Asn Thr Leu Val Val Ser
              50              55              60
Phe Val Asp Leu Glu Gln Phe Asn Gln Gln Leu Ser Thr Thr Ile Gln
              65              70              75              80
Glu Glu Phe Tyr Arg Val Tyr Pro Tyr Leu Cys Arg Ala Leu Lys Thr
              85              90              95

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Phe	Val	Lys	Asp	Arg	Lys	Glu	Ile	Pro	Leu	Ala	Lys	Asp	Phe	Tyr	Val
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		115					120					125			
Ser	Arg	Ile	Gly	Leu	Leu	Thr	Arg	Ile	Ser	Gly	Gln	Val	Val	Arg	Thr
	130					135					140				
His	Pro	Val	His	Pro	Glu	Leu	Val	Ser	Gly	Thr	Phe	Leu	Cys	Leu	Asp
145					150					155					160
Cys	Gln	Thr	Val	Ile	Arg	Asp	Val	Glu	Gln	Gln	Phe	Lys	Tyr	Thr	Gln
			165						170					175	
Pro	Asn	Ile	Cys	Arg	Asn	Pro	Val	Cys	Ala	Asn	Arg	Arg	Arg	Phe	Leu
			180					185						190	
Leu	Asp	Thr	Asn	Lys	Ser	Arg	Phe	Val	Asp	Phe	Gln	Lys	Val	Arg	Ile
	195						200					205			
Gln	Glu	Thr	Gln	Ala	Glu	Leu	Pro	Arg	Gly	Ser	Ile	Pro	Arg	Ser	Leu
	210					215					220				
Glu	Val	Ile	Leu	Arg	Ala	Glu	Ala	Val	Glu	Ser	Ala	Gln	Ala	Gly	Asp
225					230					235					240
Lys	Cys	Asp	Phe	Thr	Gly	Thr	Leu	Ile	Val	Val	Pro	Asp	Val	Ser	Lys
			245						250					255	
Leu	Ser	Thr	Pro	Gly	Ala	Arg	Ala	Glu	Thr	Asn	Ser	Arg	Val	Ser	Gly
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Val	Asp	Gly	Tyr	Glu	Thr	Glu	Gly	Ile	Arg	Gly	Leu	Arg	Ala	Leu	Gly
	275						280					285			
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Pro	Thr	Asn	Pro	Arg	Phe	Gly	Gly	Lys	Glu	Leu	Arg	Asp	Glu	Glu	Gln
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Thr	Ala	Glu	Ser	Ile	Lys	Asn	Gln	Met	Thr	Val	Lys	Glu	Trp	Glu	Lys
			325						330					335	
Val	Phe	Glu	Met	Ser	Gln	Asp	Lys	Asn	Leu	Tyr	His	Asn	Leu	Cys	Thr
			340					345					350		
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Leu	Leu	Met	Leu	Phe	Gly	Gly	Val	Pro	Lys	Thr	Thr	Gly	Glu	Gly	Thr
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Ser	Leu	Arg	Gly	Asp	Ile	Asn	Val	Cys	Ile	Val	Gly	Asp	Pro	Ser	Thr
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Ala	Lys	Ser	Gln	Phe	Leu	Lys	His	Val	Glu	Glu	Phe	Ser	Pro	Arg	Ala
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Val	Tyr	Thr	Ser	Gly	Lys	Ala	Ser	Ser	Ala	Ala	Gly	Leu	Thr	Ala	Ala
			420					425					430		
Val	Val	Arg	Asp	Glu	Glu	Ser	His	Glu	Phe	Val	Ile	Glu	Ala	Gly	Ala
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Leu	Met	Leu	Ala	Asp	Asn	Gly	Val	Cys	Cys	Ile	Asp	Glu	Phe	Asp	Lys
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Met	Asp	Val	Arg	Asp	Gln	Val	Ala	Ile	His	Glu	Ala	Met	Glu	Gln	Gln
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Thr	Ile	Ser	Ile	Thr	Lys	Ala	Gly	Val	Lys	Ala	Thr	Leu	Asn	Ala	Arg
			485						490					495	
Thr	Ser	Ile	Leu	Ala	Ala	Ala	Asn	Pro	Ile	Ser	Gly	His	Tyr	Asp	Arg
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Ser	Lys	Ser	Leu	Lys	Gln	Asn	Ile	Asn	Leu	Ser	Ala	Pro	Ile	Met	Ser
	515						520					525			
Arg	Phe	Asp	Leu	Phe	Phe	Ile	Leu	Val	Asp	Glu	Cys	Asn	Glu	Val	Thr
	530					535					540				
Asp	Tyr	Ala	Ile	Ala	Arg	Arg	Ile	Val	Asp	Leu	His	Ser	Arg	Ile	Glu
545					550					555					560
Glu	Ser	Ile	Asp	Arg	Val	Tyr	Ser	Leu	Asp	Asp	Ile	Arg	Arg	Tyr	Leu
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Leu	Phe	Ala	Arg	Gln	Phe	Lys	Pro	Lys	Ile	Ser	Lys	Glu	Ser	Glu	Asp

580 585 590
 Phe Ile Val Glu Gln Tyr Lys His Leu Arg Gln Arg Asp Gly Ser Gly
 595 600 605
 Val Thr Lys Ser Ser Trp Arg Ile Thr Val Arg Gln Leu Glu Ser Met
 610 615 620
 Ile Arg Leu Ser Glu Ala Met Ala Arg Met His Cys Cys Asp Glu Val
 625 630 635 640
 Gln Pro Lys His Val Lys Glu Ala Phe Arg Leu Leu Asn Lys Ser Ile
 645 650 655
 Ile Arg Val Glu Thr Pro Asp Val Asn Leu Asp Gln Glu Glu Glu Ile
 660 665 670
 Gln Met Glu Val Asp Glu Gly Ala Gly Gly Ile Asn Gly His Ala Asp
 675 680 685

 Ser Pro Ala Pro Val Asn Gly Ile Asn Gly Tyr Asn Glu Asp Ile Asn
 690 695 700
 Gln Glu Ser Ala Pro Lys Ala Ser Leu Arg Leu Gly Phe Ser Glu Tyr
 705 710 715 720
 Cys Arg Ile Ser Asn Leu Ile Val Leu His Leu Arg Lys Val Glu Glu
 725 730 735
 Glu Glu Asp Glu Ser Ala Leu Lys Arg Ser Glu Leu Val Asn Trp Tyr
 740 745 750
 Leu Lys Glu Ile Glu Ser Glu Ile Asp Ser Glu Glu Glu Leu Ile Asn
 755 760 765
 Lys Lys Arg Ile Ile Glu Lys Val Ile His Arg Leu Thr His Tyr Asp
 770 775 780
 His Val Leu Ile Glu Leu Thr Gln Ala Gly Leu Lys Gly Ser Thr Glu
 785 790 795 800
 Gly Ser Glu Ser Tyr Glu Glu Asp Pro Tyr Leu Val Val Asn Pro Asn
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 Tyr Leu Leu Glu Asp
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<210> 33
 <211> 2111
 <212> DNA
 <213> Homo sapiens

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 tcctgtggga cccccgccct cggcagcctc ctgttcctgc tcttcagcct cggatgggtg 180
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<210> 34

<211> 622

<212> PRT

<213> Homo sapiens

<400> 34

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Ala Leu Gly Ser Leu Leu Phe Leu Leu Phe Ser Leu Gly Trp Val Gln
          20          25          30
Pro Ser Arg Thr Leu Ala Gly Glu Thr Gly Gln Glu Ala Pro Leu
          35          40          45
Asp Gly Val Leu Ala Asn Pro Asn Ile Ser Ser Leu Ser Pro Arg
          50          55          60
Gln Leu Leu Gly Phe Pro Cys Ala Glu Val Ser Gly Leu Ser Thr Glu
          65          70          75          80
Arg Val Arg Glu Leu Ala Val Ala Leu Ala Gln Lys Asn Val Lys Leu
          85          90          95
Ser Thr Glu Gln Leu Arg Cys Leu Ala His Arg Leu Ser Glu Pro Pro
          100          105          110
Glu Asp Leu Asp Ala Leu Pro Leu Asp Leu Leu Leu Phe Leu Asn Pro
          115          120          125
Asp Ala Phe Ser Gly Pro Gln Ala Cys Thr Arg Phe Phe Ser Arg Ile
          130          135          140
Thr Lys Ala Asn Val Asp Leu Leu Pro Arg Gly Ala Pro Glu Arg Gln
          145          150          155          160
Arg Leu Leu Pro Ala Leu Ala Cys Trp Gly Val Arg Gly Ser Leu
          165          170          175
Leu Ser Glu Ala Asp Val Arg Ala Leu Gly Gly Leu Ala Cys Asp Leu
          180          185          190
Pro Gly Arg Phe Val Ala Glu Ser Ala Glu Val Leu Leu Pro Arg Leu
          195          200          205
Val Ser Cys Pro Gly Pro Leu Asp Gln Asp Gln Gln Glu Ala Ala Arg
          210          215          220
Ala Ala Leu Gln Gly Gly Gly Pro Pro Tyr Gly Pro Pro Ser Thr Trp
          225          230          235          240
Ser Val Ser Thr Met Asp Ala Leu Arg Gly Leu Leu Pro Val Leu Gly
          245          250          255
Gln Pro Ile Ile Arg Ser Ile Pro Gln Gly Ile Val Ala Ala Trp Arg
          260          265          270
Gln Arg Ser Ser Arg Asp Pro Ser Trp Arg Gln Pro Glu Arg Thr Ile
          275          280          285
Leu Arg Pro Arg Phe Arg Arg Glu Val Glu Lys Thr Ala Cys Pro Ser
          290          295          300
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<210> 35
<211> 2731
<212> DNA
<213> Homo sapiens
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<400> 35						
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tcaaccctga	ggtgaagaag	tcttgctgga	ccgaggagga	ggaccgcata	atctgcgagg	660
cccacaagggt	gctggggcaac	cgctggggcg	agatcgccaa	gatgttgcca	ggaggagcac	720
acaatgctgt	gaagaatcac	tggaaactcta	ccatcaaaag	gaaggtggac	acaggaggct	780
tcttgagcga	gtccaaagac	tqcaagcccc	cagtgacttt	gctgtgtggag	ctcaggagaca	840

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<210> 36

<211> 700

<212> PRT

<213> Homo sapiens

<400> 36

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          20          25          30
Lys Trp Thr His Glu Glu Asp Glu Gln Leu Arg Ala Leu Val Arg Gln
          35          40          45
Phe Gly Gln Gln Asp Trp Lys Phe Leu Ala Ser His Phe Pro Asn Arg
          50          55          60
Thr Asp Gln Gln Cys Gln Tyr Arg Trp Leu Arg Val Leu Asn Pro Asp
          65          70          75          80
Leu Val Lys Gly Pro Trp Thr Lys Glu Glu Asp Gln Lys Val Ile Glu
          85          90          95
Leu Val Lys Lys Tyr Gly Thr Lys Gln Trp Thr Leu Ile Ala Lys His
          100         105         110
Leu Lys Gly Arg Leu Gly Lys Gln Cys Arg Glu Arg Trp His Asn His
          115         120         125
Leu Asn Pro Glu Val Lys Lys Ser Cys Trp Thr Glu Glu Glu Asp Arg
          130         135         140
Ile Ile Cys Glu Ala His Lys Val Leu Gly Asn Arg Trp Ala Glu Ile

145           150           155           160
Ala Lys Met Leu Pro Gly Arg Thr Asp Asn Ala Val Lys Asn His Trp

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				165					170					175	
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			180					185					190		
Ser	Lys	Asp	Cys	Lys	Pro	Pro	Val	Tyr	Leu	Leu	Leu	Glu	Leu	Glu	Asp
		195					200					205			
Lys	Asp	Gly	Leu	Gln	Ser	Ala	Gln	Pro	Thr	Glu	Gly	Gln	Gly	Ser	Leu
	210					215					220				
Leu	Thr	Asn	Trp	Pro	Ser	Val	Pro	Pro	Thr	Ile	Lys	Glu	Glu	Glu	Asn
225				230						235					240
Ser	Glu	Glu	Glu	Leu	Ala	Ala	Ala	Thr	Thr	Ser	Lys	Glu	Gln	Glu	Pro
			245						250					255	
Ile	Gly	Thr	Asp	Leu	Asp	Ala	Val	Arg	Thr	Pro	Glu	Pro	Leu	Glu	Glu
			260					265					270		
Phe	Pro	Lys	Arg	Glu	Asp	Gln	Glu	Gly	Ser	Pro	Pro	Glu	Thr	Ser	Leu
		275					280					285			
Pro	Tyr	Lys	Trp	Val	Val	Glu	Ala	Ala	Asn	Leu	Leu	Ile	Pro	Ala	Val
	290					295					300				
Gly	Ser	Ser	Leu	Ser	Glu	Ala	Leu	Asp	Leu	Ile	Glu	Ser	Asp	Pro	Asp
305				310						315					320
Ala	Trp	Cys	Asp	Leu	Ser	Lys	Phe	Asp	Leu	Pro	Glu	Glu	Pro	Ser	Ala
			325					330					335		
Glu	Asp	Ser	Ile	Asn	Asn	Ser	Leu	Val	Gln	Leu	Gln	Ala	Ser	His	Gln
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Gln	Gln	Val	Leu	Pro	Pro	Arg	Gln	Pro	Ser	Ala	Leu	Val	Pro	Ser	Val
		355					360					365			
Thr	Glu	Tyr	Arg	Leu	Asp	Gly	His	Thr	Ile	Ser	Asp	Leu	Ser	Arg	Ser
	370				375						380				
Ser	Arg	Gly	Glu	Leu	Ile	Pro	Ile	Ser	Pro	Ser	Thr	Glu	Val	Gly	Gly
385				390						395					400
Ser	Gly	Ile	Gly	Thr	Pro	Pro	Ser	Val	Leu	Lys	Arg	Gln	Arg	Lys	Arg
			405					410						415	
Arg	Val	Ala	Leu	Ser	Pro	Val	Thr	Glu	Asn	Ser	Thr	Ser	Leu	Ser	Phe
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Leu	Asp	Ser	Cys	Asn	Ser	Leu	Thr	Pro	Lys	Ser	Thr	Pro	Val	Lys	Thr
		435					440					445			
Leu	Pro	Phe	Ser	Pro	Ser	Gln	Phe	Leu	Asn	Phe	Trp	Asn	Lys	Gln	Asp
	450					455					460				
Thr	Leu	Glu	Leu	Glu	Ser	Pro	Ser	Leu	Thr	Ser	Thr	Pro	Val	Cys	Ser
465				470						475					480
Gln	Lys	Val	Val	Val	Thr	Thr	Pro	Leu	His	Arg	Asp	Lys	Thr	Pro	Leu
			485						490					495	
His	Gln	Lys	His	Ala	Ala	Phe	Val	Thr	Pro	Asp	Gln	Lys	Tyr	Ser	Met
			500					505					510		
Asp	Asn	Thr	Pro	His	Thr	Pro	Thr	Pro	Phe	Lys	Asn	Ala	Leu	Glu	Lys
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Ala	Pro	Met	Ser	Ser	Ala	Trp	Lys	Thr	Val	Ala	Cys	Gly	Gly	Thr	Arg
			660					665					670		
Asp	Gln	Leu	Phe	Met	Gln	Glu	Lys	Ala	Arg	Gln	Leu	Leu	Gly	Arg	Leu
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Lys	Pro	Ser	His	Thr	Ser	Arg	Thr	Leu	Ile	Leu	Ser				
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<210> 37

<211> 2304

<212> DNA

<213> Homo sapiens

<400> 37

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<211> 431

<212> PRT

<213> Homo sapiens

<400> 38

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Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg			
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Pro Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg			
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Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp			
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Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His			
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Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly			
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His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys			
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Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr			
290	295	300	
Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys			
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Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val			
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Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly			
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Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys			
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Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu			
370	375	380	
Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys			
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<210> 39

<211> 1760

<212> DNA

<213> Homo sapiens

<400> 39

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<210> 40
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<212> PRT
<213> Homo sapiens

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35          40          45
Leu Glu Ser Ser Asp Cys Glu Ser Leu Asp Ser Ser Asn Ser Gly Phe
50          55          60
Gly Pro Glu Glu Asp Thr Ala Tyr Leu Asp Gly Val Ser Leu Pro Asp
65          70          75          80
Phe Glu Leu Leu Ser Asp Pro Glu Asp Glu His Leu Cys Ala Asn Leu
85          90          95
Met Gln Leu Leu Gln Glu Ser Leu Ala Gln Ala Arg Leu Gly Ser Arg
100         105         110
Arg Pro Ala Arg Leu Leu Met Pro Ser Gln Leu Val Ser Gln Val Gly
115         120         125
Lys Glu Leu Leu Arg Leu Ala Tyr Ser Glu Pro Cys Gly Leu Arg Gly
130         135         140
Ala Leu Leu Asp Val Cys Val Glu Gln Gly Lys Ser Cys His Ser Val
145         150         155         160
Gly Gln Leu Ala Leu Asp Pro Ser Leu Val Pro Thr Phe Gln Leu Thr
165         170         175
Leu Val Leu Arg Leu Asp Ser Arg Leu Trp Pro Lys Ile Gln Gly Leu
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<210> 41
 <211> 5698
 <212> DNA
 <213> Homo sapiens

<400> 41

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 <212> PRT
 <213> Homo sapiens

<400> 42
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Gln	Arg	Asp	Pro	Lys	Met	Ser	Cys	Ile	Arg	Val	Thr	Ile	Asp	Pro	Glu		
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<211> 4797

<212> DNA

<213> Homo sapiens

<400> 43

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<212> PRT

<213> Homo sapiens

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Asp Arg Glu Leu Thr Arg Gly Leu Cys Ser Asp Leu Glu Ser Met Cys
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